ABSTRACT OF THE DISCLOSURE

The present invention relates to a chimeric gene that includes a first DNA molecule encoding a hypersensitive response elicitor protein or polypeptide, a promoter operably linked 5' to the first DNA molecule to induce transcription of the first DNA molecule in response to activation of the promoter by an oomycete, and a 3' regulatory region operably linked to the first DNA molecule. Also disclosed are an expression system and a host cell containing the chimeric gene. The present invention also relates to a transgenic plant resistant to disease resulting from oomycete infection, the transgenic plant including the chimeric gene, wherein the promoter induces transcription of the first DNA molecule in response to infection of the plant by an oomycete. Transgenic seeds and transgenic cultivars obtained from the transgenic plant are also disclosed. Additional aspects of the present invention include methods of making a recombinant plant cell and a transgenic plant.